naming polynomials

Polynomial	Degree	Name Using Degree	Number of Terms	Name Using Number of Terms
6				
$5x + 9$				
$4x^2 + 7x + 3$				
$2x^3$				
$8x^2y^2 - 2x^3 + 3xy + 1$				

When naming the polynomial, name the degree first and the number of terms second.

Example 1 Write each polynomial in **standard form**. Then name the polynomial.

a) $7 - 3x^3 + 6x^2$

b) $3x + 6xy$

Standard Form: the form of a polynomial in which terms are written in descending order according to their degree.

7.1 Adding and Subtracting Polynomials

Example 2 Combine like terms.

a) $4x + 3x^2 + 2x - x^2 + 5$ (Use Algebra Tiles to Model)

b) **Try It!** $-3x^2 + 5x - 2x + x^2 - 4$

c) **Try It!** $4x^2y + 2xy^2 - 5x^2y$

IMPORTANT: Like terms must have the same variable and same exponent. You can ONLY combine terms when they are like terms.

Example 3 Simplify the following by adding or subtracting the polynomials.

a) $(4x^2 + 2x - 3) + (3x^2 + 6)$

Method 1:

Method 2:

b) $(6x^2 + 3x - 2) - (3x^2 + 5x - 8)$

Method 1:

Method 2: